



# Duncan R - 75

## (12V75AH)

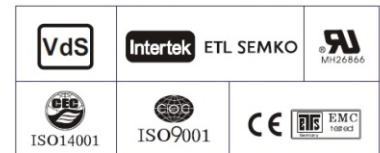


### Specification

Nominal Voltage	12 VDC
Nominal Capacity (10 HR)	>/=75 Ah
Floating voltage range	13.5 - 13.72V
Dimensions	Length 259+/-3mm
	Width 168+/-2mm
	Container Height 208+/-3mm
	Total Height (With Terminal) 214+/-3mm
Approx Weight	22.3 Kg.
Terminal	T6/T9
Container Material	ABS
Building material	Electrolyte, Type Gel, cadmium free, AGM, AGM-VRLA.
Rated Capacity	78.0 Ah/3.90A (20hr, 1.80 V/Cell, 25°C/77°F)
	75.0 Ah/7.50A (10hr, 1.80 V/Cell, 25°C/77°F)
	64.5 Ah/12.9A (5 hr, 1.75 V/Cell, 25°C/77°F)
	58.5 Ah/19.5A (3 hr, 1.75 V/Cell, 25°C/77°F)
	45.8 Ah/45.8A (1 hr, 1.60 V/Cell, 25°C/77°F)
Max. Discharge Current	900A (5s)
Internal Resistance	Approx 6.6 m ohms
	Discharge -15 - 50°C (5-122°F)
	Charge 0 - 40°C (32-104°F)
Operating Temp. Range	Storage -40 - 40°C (5-104°F)
	25+/-3°C (77+/-5°F)
Nominal Operating Temp. Range	Initial charging current less than 22.5A voltage 14.4V-15.0V at 25°C (77°F) temp. Coefficient -20mV/°C
Cycle Use	Continuous
Working cycles	>1500
Deep cycles	No limit on initial charging current voltage 13.5V-13.8V at 25°C (77°F) temp. Coefficient -20mV/°C
Standby Use	40°C (104°F) 103%
Capacity affected by Temperature	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	Duncan R series batteries may be stored for up to 6 months at 25°C (77°F) and then a fresh charging is required. For higher temperatures the time interval will be shorter.
Depth of Discharge	At >=50%
Construction	Fully sealed and maintenance-free batteries
Maintenance	Grooming and cleaning only connectors
Plates	With out antimony and cadmium
Useful life	10 years
Accessories	Connectors and screws in stainless steel with eye terminals for wire #8
Permanent marker	Date, manufacture, warranty, capacity and reference

### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system



### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	128.4	100.9	85.8	71.8	57.1	43.2	35.4	22.5	17.8	14.5	11.7	10.2	8.29	7.08	3.86
1.80V/cell	172.3	128.9	103.7	84.9	67.3	50.2	39.6	24.6	19.2	15.5	12.6	10.9	8.79	7.50	3.90
1.75V/cell	194.3	141.7	113.3	91.3	69.9	52.1	41.4	25.5	19.5	15.9	12.9	11.2	8.94	7.58	3.94
1.70V/cell	213.9	154.4	120.9	95.9	72.7	54.2	42.7	26.5	20.1	16.3	13.2	11.5	9.07	7.65	4.01
1.65V/cell	235.9	166.7	128.6	101.9	76.7	55.6	44.2	27.2	20.9	16.8	13.6	11.7	9.21	7.81	4.07
1.60V/cell	260.2	180.9	137.5	108.6	81.0	57.9	45.8	28.2	21.6	17.4	14.1	12.0	9.30	7.89	4.09

### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

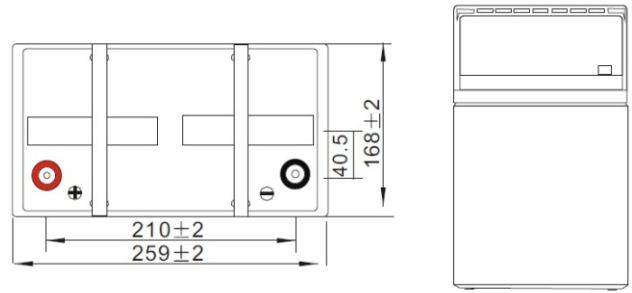
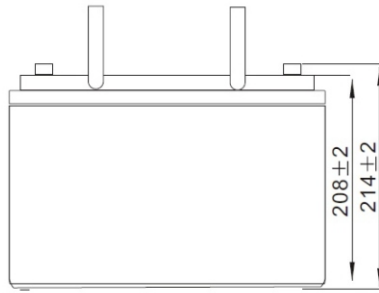
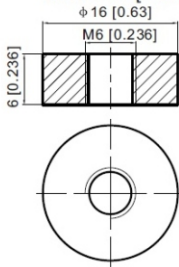
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	234.7	186.4	160.1	135.3	108.7	83.0	68.2	43.7	34.7	28.4	23.0	20.1	16.4	14.0	7.65
1.80V/cell	311.7	235.4	190.9	157.6	126.3	95.8	76.0	47.4	37.1	30.2	24.6	21.4	17.3	14.8	7.71
1.75V/cell	343.9	254.5	205.9	167.9	130.1	98.4	79.1	49.0	37.7	30.8	25.1	22.0	17.6	14.9	7.78
1.70V/cell	368.2	271.1	216.8	175.1	134.6	102.0	81.4	50.8	38.7	31.5	25.7	22.4	17.8	15.1	7.92
1.65V/cell	400.3	289.9	228.8	184.7	140.9	103.6	83.5	52.0	40.1	32.5	26.3	22.8	18.0	15.4	8.02
1.60V/cell	431.3	307.6	240.6	194.6	147.7	107.4	86.0	53.4	41.2	33.4	27.1	23.2	18.2	15.5	8.05

## Dimensions

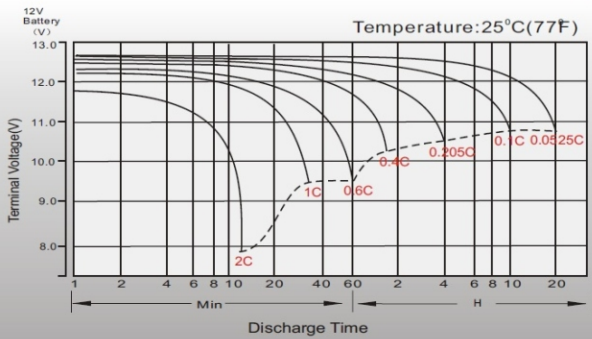


### T6 Terminal

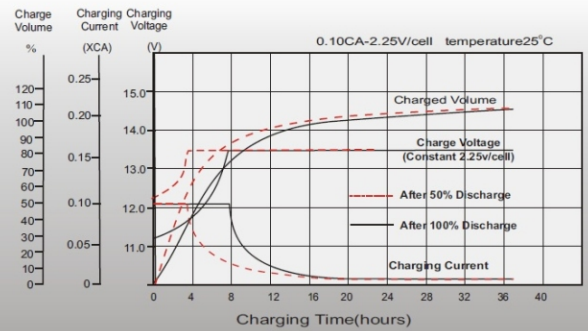
Unit: mm [inches]



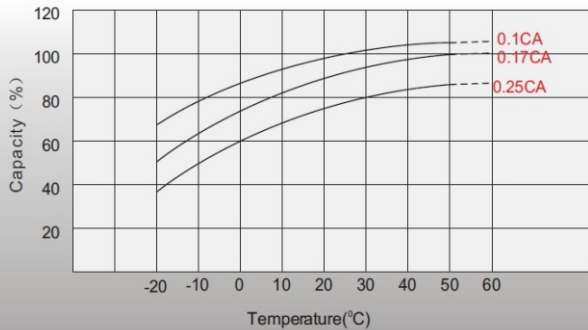
## Discharge Characteristics



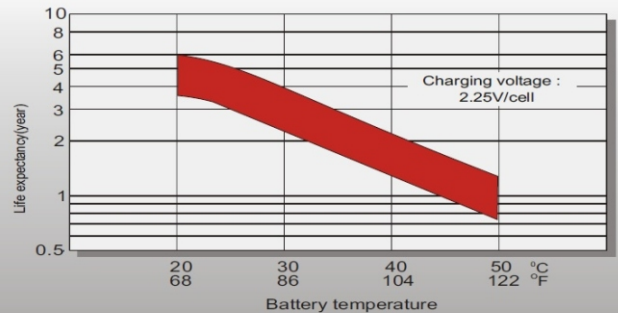
## Float Charging Characteristics



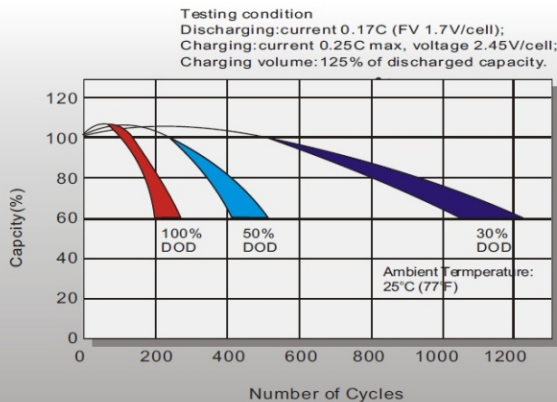
## Temperature Effects in Relation to Battery Capacity



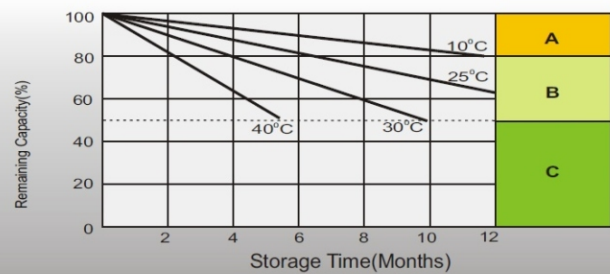
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

## Sales Office